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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,184	12/11/2001	Marcel Breeuwer	PHNL000693US	2705

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
595 MINER ROAD  
CLEVELAND, OH 44143

EXAMINER

LU, TOM Y

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/014,184	<b>Applicant(s)</b> BREEUWER, MARCEL	
	<b>Examiner</b> Tom Y. Lu	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed on 09/08/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: “the elements shown in Fig. 2 ... within left ventricular blood pool 50”, “in a sequence of images, fixed and ... due to motion artifacts” and “Fig. 4 shows a data processing system 100... displayed on display device 100” at page 3 of amendment. Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Response to Arguments***

2. Applicant’s arguments, see Remarks, filed 09/08/2005, with respect to the rejection(s) of claim(s) 1, 8 and 9 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chandler (U.S. Patent No. 5,860,931).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- a. Referring to Claim 1, “acquiring a sequence of images... under perfusion investigation is displayed while concurrently implementing the perfusion measurement” was not described in the original disclosure.
- b. Claims 2-7 are rejected as being dependent upon claim 1.
- c. Claim 8 is rejected for the same reason given in claim 1.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Chandler (U.S. Patent No. 5,860,931).

- a. Referring to Claim 1, Chandler discloses a method of visualizing the perfusion of an organ concurrently with implementation of a perfusion measurement process, including steps of: acquiring a sequence of images (column 10, line 66, “acquisition sequence”) which include a region of interest (column 11, line 2, “tissue of interest”) within which a portion of the organ under perfusion investigation (column 11, line 4, “optimal perfusion”) is displayed (display 145, see figure 1) while concurrently implementing the perfusion measurement (column 10, line 54); and implementing a transformation operation (column 11,

line 5, "translation and rotation") on every pair of successive images (auto correlation is performed on pairs of images) from the series of images of the portion of the organ in the ROI such a manner that subsequent to the transformation operation the organ will be displayed essentially in a fixed position (column 11, line 12, the images are repositioned at a fixed point after auto correlation. Also see column 11, lines 20-22).

- b. With regard to Claim 8, see explanation in Claim 1.
- c. With regard to Claim 9, see explanation in Claim 1, and Chandler employs a computer with embedded computer program to execute the functional steps.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandler in view of Cesmeli et al ("An automated temporal alignment technique for the translational and rotational correction of digital radiographic images of Bjork-shiley heart valves" Proceedings Of The Computers In cardiology Conference. London, Sept 5-8, 1993, Los Alnmitos, IEEE Comp. SOC. Press, US, 5/9/93/ pages 619-622).

- a. Referring to Claim 2, Chandler teaches using auto-correlation methods well known in the art to perform translation and rotation of the images. Cesmeli teaches a fully automated technique for the translational and rotational correction

of sequential images. At the time the invention was made, it would have been obvious for a person of ordinary skill in the art to adopt Cesmeli's technique in Chandler because Chandler indicates any well-known method that performs translation and rotation of the images is welcomed. The combination of Chandler and Cesmeli discloses the method characterized in that the first image in time serves as a reference base and that each of the subsequent images is transformed so as to minimize difference between each of said images and the reference base (see section 2.2 on page 620, right column and section 3 on page 621 in Cesmeli).

- b. Referring to Claim 3, the combination of Chandler and Cesmeli discloses the method characterized in that the first image in time of every pair of successive images serves as a reference base, and that the subsequent second image is transformed so as to minimize difference between said second image and the reference base (see explanation in Claim 2, and each pair of successive images in Cesmeli are the preceding image and the subsequent image).
- c. Referring to Claim 4, the combination of Chandler and Cesmeli discloses the method characterized in that the transformation operation is composed of a rotation operation and a translation operation that are performed on the image (page 620, see 2.2 data analysis section in Cesmeli).
- d. Referring to Claim 5, Chandler discloses prior to the transformation operation, there is determined a reference region in the image that constitutes the reference base, also included in the subsequent image (measurement regions over the tissue

of interest at column 11, lines 1-2, are the claimed “reference image”), the rest of limitations are explained in Claim 2.

- e. Referring to Claim 6, Chandler discloses wherein the reference image is bounded by the immediate vicinity of the organ being examined by the ROI (measurement regions in Chandler is bounded by the immediate vicinity of the organ).
- f. Referring to Claim 7, the combination of Chandler and Cesmeli discloses wherein the transformation operation as determined by means of the reference region is performed on the entire image (Cesmeli, page 620 right column).

#### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goris, U.S. Patent No. 5,970,182, see whole document.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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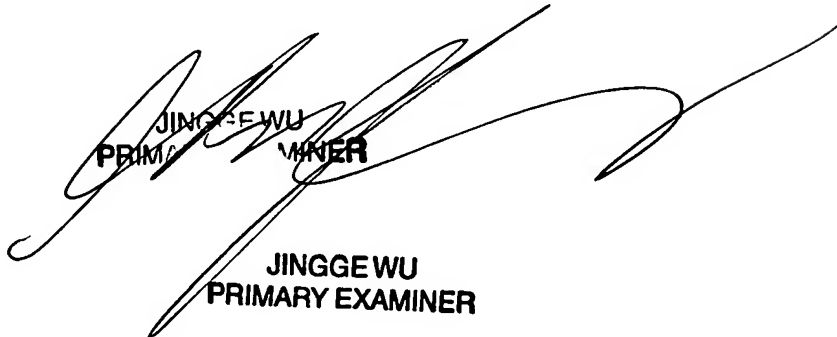
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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